

**From:** Cynthia Caporale/ESC/R3/USEPA/US  
**Sent:** 3/19/2012 6:12:14 PM  
**To:** Peggy Zawodny/ESC/R3/USEPA/US@EPA  
**CC:**  
**Subject:** Fw: EXTERNAL: Re: Verification/Completeness Check for WO1202015 PART2 Posted Feb 29 and WO1202001 PART 2 Posted Mar 05)

FYI - per our discussion

Cynthia Caporale, Chief  
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----- Forwarded by Cynthia Caporale/ESC/R3/USEPA/US on 03/19/2012 07:43 AM -----

From: Ex. 4 - CBI @lmco.com>  
To: Cynthia Caporale/ESC/R3/USEPA/US@EPA  
Cc: Ex. 4 - CBI @lmco.com>, Gary Newhart/CI/USEPA/US@EPA, John Gilbert/CI/USEPA/US@EPA, Kelley Chase/R3/USEPA/US@EPA, Ex. 4 - CBI @lmco.com>, Sella Burchette/ERT/R2/USEPA/US@EPA, Robin Costas/ESC/R3/USEPA/US@EPA, Sue Warner/ESC/R3/USEPA/US@EPA, Peggy Zawodny/ESC/R3/USEPA/US@EPA  
Date: 03/19/2012 07:28 AM  
Subject: RE: EXTERNAL: Re: Verification/Completeness Check for WO1202015 PART2 Posted Feb 29 and WO1202001 PART 2 Posted Mar 05)

Good Morning Cindy,

I have copied the pertinent sections out of the NFG for your review:

**Table 10. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Actions for Trace Volatiles Analysis**

Criteria	Action	
	Detected Spiked Compounds	Non-detected Spiked Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% < %R < Lower Acceptance Limit	J	UJ
%R < 20%	J	Use professional judgment
Lower Acceptance Limit < %R; RPD < Upper Acceptance Limit	No qualification	

Although the NFG does not have qualifications for the LCS for trace VOCs, SERAS does qualify based on the LCS because the LCS does not have any matrix effects. We use the NFG for pesticides as follows:

**Table 56. Laboratory Control Sample (LCS) Recovery Actions**

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
%R > Upper Acceptance Limit	J	No qualification
%R < Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

Deb

**From:** Cynthia Caporale [mailto:Caporale.Cynthia@epamail.epa.gov]

**Sent:** Friday, March 16, 2012 5:52 PM

**To:** Ex. 4 - CBI

**Cc:** Ex. 4 - CBI; Gary Newhart; John Gilbert; Kelley Chase; Ex. 4 - CBI; Sella Burchette; Robin Costas; Sue Warner; Peggy Zawodny

**Subject:** EXTERNAL: Re: Verification/Completeness Check for WO1202015 PART2 Posted Feb 29 and WO1202001 PART 2 Posted Mar 05)

The report on the Dimock Verification/Completeness Check for file 1201015 FINAL Part 2 of 3 R33907 02 28 12 1647.pdf was reviewed and below are the responses for your consideration.

We agree with all of the proposed qualifier suggestions with maybe one exception - the qualification of non-detects for VOCs based on LCS and MS/MSD. I need confirmation on the rationale and determine if it would be appropriate to qualifier non-detects as estimated (UJ) and will send that Monday.

File [1201015 FINAL PART 2 of 3 R33907 02 28 12 1647.pdf](#)

1. For VOCs, the following qualifications should be applied to the following samples as noted based on the blank results (method, field, trip in that order) in accordance with the National Functional Guidelines: Acetone 3.8U, methylene chloride 2.6J, naphthalene 0.5U, toluene 0.6J for sample EB01, acetone 3.9U, chloroform 7.1U, methylene chloride 2.7J, naphthalene 0.5U and toluene 0.9J for sample FB06, acetone 2.0U for samples HW18, HW26, HW20, HW20-P, HW32-P, HW33 and HW33a-P; acetone 3.3U for samples HW13 and HW18-P; acetone 2.0U and chloroform 0.5U for samples HW35 and HW52; acetone 2.2J for sample HW33b-P; acetone 3.1U for sample HW29z and chloroform 0.5U for FB07.

**Response:** Elevating the QL and qualifying "U" is not the typical procedure for R3 validation; however, if appropriate for this project we support that decision.

2. For VOCs, the LCS and MS recoveries (Batches BB20202 and BB21007) for styrene and o-xylene are missing from the laboratory report.

**Response:** Styrene and o-xylene are not included in the LCS. These compounds are part of the matrix spikes for samples 1201015-17. Recoveries for the compounds were within limits of 80-120%.

3. For VOCs, the LCS recovery for Batch BB21007 for 1,2-dibromo-3-chloropropane (78%) was outside of the 80-120% criterion. Results for DBCP for samples HW26-P, HW26, HW35, HW32, HW32-P, TB13, HW33, HW33a-P, HW33b-P, TB12, HW29z, HW29, HW52, FB07, TB10 and TB11 are qualified estimated "UJ".

**Response:** When all other quality control information is within criteria, non-detects are usually not qualified by R3 Lab for low LCS or MS/MSD recoveries. Since this deviates from the current procedure we will confirm on Monday whether we recommend the non-detects be qualified estimated (UJ).

4. For VOCs, the MS/MSD recoveries for bromomethane (34%/45%) for sample HW35 were outside the 70-130% criterion. Bromomethane results for sample HW35 should be qualified "UJ".

**Response:** When all other quality control information is within criteria, non-detects are usually not qualified by R3 Lab for low LCS or MS/MSD recoveries. Since this deviates from the current procedure we will confirm on Monday whether we recommend the non-detects be qualified estimated (UJ).

5. For VOC analysis, there doesn't appear to be any precision and accuracy data for cyclohexane, Freon 113, methylacetate, methylcyclohexane or MTBE for the LCS or the MS. It is recommended that results for these compounds for all samples in this data set be flagged as estimated "UJ".

**Response:** Freon 113, methyl acetate, MTBE, cyclohexane and methyl cyclohexane are not included in the LCS. These compounds are part of the matrix spikes for samples 1201015-XX and 1201015-XX. Recoveries for all 5 compounds were within limits of 80-120%.

6. For SVOCs, the following qualifications should be applied to the following samples as noted based on the blank results (method, field, in that order) in accordance with the National Functional Guidelines: bis(2-ethylhexyl)phthalate 5.00U, diethyl

phthalate 5.00U and di-n-butylphthalate 5.00U for samples EB01, FB06, HW18, HW13, HW18-P, HW25-P, HW26-P, HW26, HW35, HW20-P, HW32, HW32-P, HW33, HW52 and FB07; and bis(2-ethylhexyl)phthalate 5.00U, diethylphthalate 5.00U, di-n-butylphthalate 5.00U and butylbenzylphthalate 5.00U for samples HW20, HW33a-P, HW33b-P, HW29z and HW29.

**Response:** Elevating the QL and qualifying "U" is not the typical procedure for R3 validation; however, if appropriate for this project we support that decision.

7. For SVOCs prepared on 2/6/12 in BB20601, the mid-level spike (LCS) was spiked at 40 µg/L instead of 60 µg/L previously used. Reporting limits for pentachlorophenol should be changed to 40µg/L for samples HW25-P, HW26-P, HW26, HW35, HW20, HW20-P, HW32, HW32-P, HW33, HW33a-P, HW33b-P, HW29z, HW29, HW52 and FB07.

**Response:** We agree with this comment. A supplemental report with the corrections can be generated upon request.

8. For SVOC Batch 20601, it is stated in the case narrative that results for 2-methoxyethanol and 1-methylnaphthalene are qualified "UJ" since the LCS did not contain these compounds. This reviewer agrees with the qualification but recommends that the reporting limit be raised to 60 µg/L for 2-methoxyethanol since previous batches have indicated that the recovery of this analyte at this concentration is acceptable. The reporting limit for samples identified as HW25-P, HW26-P, HW26, HW35, HW20, HW20-P, HW32, HW32-P, HW33, HW33a-P, HW33b-P, HW29z, HW29, HW52 and FB07.

**Response:** We agree with this comment. A supplemental report with the corrections can be generated upon request. Also note that results for 2-methoxyethanol are also available with the report on glycols (WO 1201015 PART 1 of 3).

9. This reviewer agrees with the raising the reporting limit to 60 µg/L for 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, hexachlorocyclopentadiene, 2-methoxyethanol, 4-nitrophenol, pentachlorophenol and 2,3,4,6-tetrachlorophenol for samples EB01, FB06, HW18, HW13 and HW18-P.

**Response:** Agree.

10. For SVOCs, FB07 is missing a "UJ" qualifier on the laboratory report for 1-methylnaphthalene. A qualifier of "UJ" needs to be added to the result qualifier column in Scribe for this compound and sample.

**Response:** We agree with this comment. A supplemental report with the corrections can be generated upon request.

11. It is assumed that all required instrument QC (RSD, %D, minimum response factors, etc.) specified by the method was run and was either within the criteria listed in the EPA R3 SOPs or qualified based on any deficiencies.

**Response:** This assumption is correct and future reports will include a statement in the narrative.

The report on the Dimock Verification/Completeness Check for file 1202001 FINAL Part 2 of 3 R33907 03 12 12 0847.pdf was reviewed and below are the responses for your consideration.

File [1202001 FINAL PART 2 of 3 R33907 03 05 12 0847.pdf](#)

1. For VOCs, the following qualifications should be applied to the following samples as noted based on the blank results (method, field, trip in that order) in accordance with the National Functional Guidelines: Acetone 2.0U for samples HW42, HW46, HW46-P, HW34a, HW42z, HW34a-P, HW28a-P, HW40, HW40-P, HW28b-P and HW09; acetone 6.7U and toluene 0.9U for sample FB09; acetone 2.8U, bromodichloromethane 0.5U, 2-butanone 2.0U, chloroform 0.5U and o-xylene 1.0U for sample FB08; acetone 2.0U and toluene 0.5U for samples HW39, HW41 and HW41-P; bromodichloromethane 0.5U, 2-butanone 2.0U, chloroform 0.5U, toluene 0.5U and o-xylene 0.5U for FB10; and acetone 3.1U for HW39-P. For the remaining results in this batch, "U" and "J" qualifiers should be carried over into the result qualifier column.

**Response:** Elevating the QL and qualifying "U" is not the typical procedure for R3 validation; however, if appropriate for this project we support that decision.

2. For VOCs, the bromomethane recovery for the MSD (63%) was outside of the QC criterion for HW39. Bromomethane results for sample HW39 should be qualified estimated "UJ".

**Response:** When all other quality control information is within criteria, non-detects are usually not qualified by R3 Lab for low LCS or MS/MSD recoveries. Since this deviates from the current procedure we will confirm on Monday whether we

**recommend the non-detects be qualified estimated (UJ).**

3. For VOC analysis, there doesn't appear to be any precision and accuracy data for cyclohexane, Freon 113, methylacetate, methylcyclohexane or MTBE for the LCS or the MS. It is recommended that results for these compounds for all samples in this data set be flagged as estimated "UJ".

**Response: Freon 113, methyl acetate, MTBE, cyclohexane and methyl cyclohexane are not included in the LCS. These compounds are part of the matrix spikes for samples 1201015-XX and 1201015-XX. Recoveries for all 5 compounds were within limits of 80-120%.**

4. For VOCs, the LCS, MS and MSD recoveries (Batch BB21005) for styrene and o-xylene are missing from the laboratory report.

**Response: When all other quality control information is within criteria, non-detects are usually not qualified by R3 Lab for low LCS or MS/MSD recoveries. Since this deviates from the current procedure we will confirm on Monday whether we recommend the non-detects be qualified estimated (UJ).**

5. For SVOCs, the following qualifications should be applied to the following samples as noted based on the blank results (method, field, in that order) in accordance with the National Functional Guidelines: bis(2-ethylhexyl)phthalate 5.00U, diethyl phthalate 5.00U and di-n-butylphthalate 5.00U for samples HW42, FB09, FB08, HW34a-P, HW28a, HW28a-P, HW39-P, HW40, HW40-P, HW41, HW41-P, HW28b-P, HW09, HW09-P and FB10; bis(2-ethylhexyl)phthalate 5.00U and di-n-butylphthalate 5.00U for samples HW46, HW46-P, HW34a and HW42z; and diethylphthalate 4.76U and di-n-butylphthalate 4.76U for sample HW39. This reviewer agrees with the remaining qualifiers assigned to samples based on LCS and MS/MSD deficiencies. All lab qualifiers with the exception of the "B" flag should be carried over to the result qualifier column in Scribe.

**Response: Elevating the QL and qualifying "U" is not the typical procedure for R3 validation; however, if appropriate for this project we support that decision.**

6. It is assumed that all required instrument QC (RSD, %D, minimum response factors, etc.) specified by the method was run and was either within the criteria listed in the EPA R3 SOPs or qualified based on any deficiencies.

**Response: This assumption is correct and future reports will include a statement in the narrative.**

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Cc: John Gilbert/CI/USEPA/US@EPA, Gary Newhart/CI/USEPA/US@EPA, Sella Burchette/ERT/R2/USEPA/US@EPA, [Ex. 4 - CBI]  
[Ex. 4 - CBI]r@lmco.com> [Ex. 4 - CBI]@lmco.com>  
Date: 03/09/2012 02:56 PM  
Subject: Verification/Completeness Check for WO1202015 PART2 Posted Feb 29 and WO1202001 PART 2 Posted Mar 05)

Please use this as the official version. I made a correction to the footer identifying the document number.

**Ex. 4 - CBI**

*Lockheed Martin*

*Scientific, Engineering, Response and Analytical Services (SERAS)*

**Ex. 4 - CBI**

**Ex. 4 - CBI**

[attachment "SERAS-172-DSR-030912\_17.docx" deleted by Cynthia Caporale/ESC/R3/USEPA/US]